Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A power supply for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the ~~intrathorasic~~ intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

a capacitor subsystem for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem,

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

2. (Currently Amended) The power supply of claim [[1]] 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 100 volts.

3. (Original) The power supply of claim 2, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 25 volts.

4. (Currently Amended) The power supply of claim [[1]] 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

5. (Currently Amended) ~~The power supply of claim 2,~~ A power supply for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the

intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

a capacitor subsystem for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem,

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 50 volts to approximately 75 volts.

6. (Currently Amended) ~~The power supply of claim 2,~~ A power supply for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

a capacitor subsystem for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem,

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 75 volts to approximately 100 volts.

7. (Currently Amended) ~~The power supply of claim 1,~~ A power supply for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

a capacitor subsystem for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 40 milliseconds.

8. (Currently Amended) The power supply of claim 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 10 milliseconds.

9. (Original) The power supply of claim 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

10. (Original) The power supply of claim 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

11. (Original) The power supply of claim 7, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

12. (Original) The power supply of claim 1, wherein the anti-bradycardia pacing energy comprises a monophasic waveform further comprising a voltage waveform that is either positive or negative in polarity.

13. (Original) The power supply of claim 12, wherein the monophasic waveform further comprises a tilt of approximately 5% to approximately 95%.

14. (Original) The power supply of claim 13, wherein the tilt is approximately 50%.

15. (Original) The power supply of claim 1, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 20 to approximately 120 stimuli/minute.

16. (Original) The power supply of claim 15, wherein the monophasic waveform is provided after a patient's heart rate is equal or less than approximately 20 beats/minute.

17. (Currently Amended) A voltage output system for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the ~~intrathorasic~~ intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

an energy storage system for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

an energy source system electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

18. (Currently Amended) The voltage output system of claim [[17]] 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 100 volts.

19. (Original) The voltage output system of claim 18, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 25 volts.

20. (Currently Amended) The voltage output system of claim [[18]] 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

21. (Currently Amended) ~~The voltage output system of claim 18~~, A voltage output system for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

an energy storage system for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

an energy source system electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 50 volts to approximately 75 volts.

22. (Currently Amended) ~~The voltage output system of claim 18,~~ A voltage output system for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

an energy storage system for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

an energy source system electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 75 volts to approximately 100 volts.

23. (Currently Amended) ~~The voltage output system of claim 17,~~ A voltage output system for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the power supply comprising:

an energy storage system for storing the anti-bradycardia pacing energy for delivery to the patient's heart; and

an energy source system electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 40 milliseconds.

24. (Currently Amended) The voltage output system of claim 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 10 milliseconds.

25. (Original) The voltage output system of claim 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

26. (Original) The voltage output system of claim 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

27. (Original) The voltage output system of claim 23, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

28. (Original) The voltage output system of claim 17, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is either positive or negative in polarity.

29. (Original) The voltage output system of claim 28, wherein the positive voltage portion further comprises a tilt of approximately 5% to approximately 95%.

30. (Original) The voltage output system of claim 29, wherein the tilt is approximately 50%.

31. (Original) The voltage output system of claim 17, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 20 to approximately 120 stimuli/minute.

32. (Original) The voltage output system of claim 31, wherein the monophasic waveform is provided after a patient's heart rate is equal or less than approximately 20 beats/minute.

33. (Currently Amended) An implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib within a patient, the implantable cardioverter-defibrillator comprising:

a housing having an electrically conductive surface on an outer surface of the housing;

a lead assembly electrically coupled to the housing and having an electrode, wherein the lead assembly does not directly contact the patient's heart or reside in the ~~intrathorasic~~ intrathoracic blood vessels;

a capacitor subsystem located within the housing and electrically coupled to the electrically conductive surface and the electrode for storing anti-bradycardia pacing energy and for delivering the anti-bradycardia pacing energy to the patient's heart through the electrically conductive surface and the electrode; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

34. (Currently Amended) The implantable cardioverter-defibrillator of claim [[33]] 39, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 100 volts.

35. (Original) The implantable cardioverter-defibrillator of claim 34, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 25 volts.

36. (Original) The implantable cardioverter-defibrillator of claim 34, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

37. (Currently Amended) ~~The implantable cardioverter-defibrillator of claim 34,~~ An implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib within a patient, the implantable cardioverter-defibrillator comprising:

a housing having an electrically conductive surface on an outer surface of the housing;

a lead assembly electrically coupled to the housing and having an electrode, wherein the lead assembly does not directly contact the patient's heart or reside in the intrathoracic blood vessels;

a capacitor subsystem located within the housing and electrically coupled to the electrically conductive surface and the electrode for storing anti-bradycardia pacing energy and for delivering the anti-bradycardia pacing energy to the patient's heart through the electrically conductive surface and the electrode; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 50 volts to approximately 75 volts.

38. (Currently Amended) ~~The implantable cardioverter-defibrillator of claim 34,~~ An implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib within a patient, the implantable cardioverter-defibrillator comprising:

a housing having an electrically conductive surface on an outer surface of the housing;

a lead assembly electrically coupled to the housing and having an electrode, wherein the lead assembly does not directly contact the patient's heart or reside in the intrathoracic blood vessels;

a capacitor subsystem located within the housing and electrically coupled to the electrically conductive surface and the electrode for storing anti-bradycardia pacing energy and for delivering the anti-bradycardia pacing energy to the patient's heart through the electrically conductive surface and the electrode; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 75 volts to approximately 100 volts.

39. (Currently Amended) ~~The implantable cardioverter defibrillator of claim 33,~~ An implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib within a patient, the implantable cardioverter-defibrillator comprising:

a housing having an electrically conductive surface on an outer surface of the housing;

a lead assembly electrically coupled to the housing and having an electrode, wherein the lead assembly does not directly contact the patient's heart or reside in the intrathoracic blood vessels;

a capacitor subsystem located within the housing and electrically coupled to the electrically conductive surface and the electrode for storing anti-bradycardia pacing energy and for delivering the anti-bradycardia pacing energy to the patient's heart through the electrically conductive surface and the electrode; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-bradycardia pacing energy to the capacitor subsystem;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 40 milliseconds.

40. (Original) The implantable cardioverter-defibrillator of claim 39, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 1 millisecond to approximately 10 milliseconds.

41. (Original) The implantable cardioverter-defibrillator of claim 39, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

42. (Original) The implantable cardioverter-defibrillator of claim 39, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

43. (Original) The implantable cardioverter-defibrillator of claim 39, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

44. (Original) The implantable cardioverter-defibrillator of claim 33, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is either positive or negative in polarity.

45. (Original) The implantable cardioverter-defibrillator of claim 44, wherein the positive voltage portion further comprises a tilt that is approximately 5% to approximately 95%.

46. (Original) The implantable cardioverter-defibrillator of claim 45, wherein the tilt is approximately 50%.

47. (Original) The implantable cardioverter-defibrillator of claim 33, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 20 to approximately 120 stimuli/minute.

48. (Original) The implantable cardioverter-defibrillator of claim 47, wherein the monophasic waveform is provided after a patient's heart rate is equal or less than approximately 20 beats/minute.

49. (Currently Amended) A method for supplying power for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the ~~intrathorasic~~ intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the method comprising:

generating anti-bradycardia pacing energy;

storing the anti-bradycardia pacing energy; and

delivering the anti-bradycardia pacing energy to the patient's heart;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

50. (Currently Amended) The method of claim [[49]] 55, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 100 volts.

51. Original) The method of claim 50, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately .1 volts to approximately 25 volts.

52. (Original) The method of claim 50, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 25 volts to approximately 50 volts.

53. (Currently Amended) ~~The method of claim 50,~~ A method for supplying power for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the

intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the method comprising:

generating anti-bradycardia pacing energy;

storing the anti-bradycardia pacing energy; and

delivering the anti-bradycardia pacing energy to the patient's heart;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 50 volts to approximately 75 volts.

54. (Currently Amended) ~~The method of claim 50,~~ A method for supplying power for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the method comprising:

generating anti-bradycardia pacing energy;

storing the anti-bradycardia pacing energy; and

delivering the anti-bradycardia pacing energy to the patient's heart;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a peak voltage that is approximately 75 volts to approximately 100 volts.

55. (Currently Amended) ~~The method of claim 50,~~ A method for supplying power for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib and using a lead system that does not directly contact a patient's heart or reside in the intrathoracic blood vessels and for providing anti-bradycardia pacing energy to the heart, the method comprising:

generating anti-bradycardia pacing energy;

storing the anti-bradycardia pacing energy; and

delivering the anti-bradycardia pacing energy to the patient's heart;

wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is ~~approximately~~ 1 millisecond to approximately 40 milliseconds.

56. (Original) The method of claim 55, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 2 milliseconds to approximately 10 milliseconds.

57. (Original) The method of claim 55, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

58. (Original) The method of claim 55, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

59. (Original) The method of claim 55, wherein the anti-bradycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

60. (Original) The method of claim 49, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is either positive or negative in polarity.

61. (Original) The method of claim 60, wherein the positive voltage portion further comprises a tilt of approximately 5% to approximately 95%.

62. (Original) The method of claim 61, wherein the tilt is approximately 50%.

63. (Original) The method of claim 49, wherein the anti-bradycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 20 to approximately 120 stimuli/minute.

64. (Original) The method of claim 63, wherein the monophasic waveform is provided after a patient's heart rate is equal or less than approximately 20 beats/minute.

65. (Original) The method of claim 49, wherein the implantable cardioverter-defibrillator is positioned subcutaneously between the third and fifth ribs.

66. (Original) The method of claim 49, wherein the implantable cardioverter-defibrillator is positioned subcutaneously between the fourth and sixth ribs.

67. (Original) The method of claim 49, wherein the implantable cardioverter-defibrillator is positioned subcutaneously between the sixth and eighth ribs.

68. (Original) The method of claim 49, wherein the implantable cardioverter-defibrillator is positioned subcutaneously between the eighth and tenth ribs.

69. (Original) The method of claim 49, wherein the implantable cardioverter-defibrillator is positioned subcutaneously between the tenth and twelfth ribs.